Study Guide for Final Exam

Philosophy 142

Spring, 2011

The exam will take place **Thursday May 12, 3–6 PM, in 110 Wheeler Hall.** You should bring your own bluebook and a pen or pencil. The exam is closed book, closed note. (We will exchange bluebooks before beginning, so don't bring one to which you are particularly attached.)

The exam will consist of several multi-part short essay questions and one longer, prepared essay.

Prepared essay topic

In this course, we have looked in some detail at several proposals to depart from classical logic and semantics:

- Prawitz's proof-theoretic conception of logical consequence.
- Belnap's relevance logic $\mathbf{E}_{\text{fde}}$.
- Continuum-valued logic and semantics for vague discourse.
- Supervaluational semantics for vague discourse.

Pick **one** of these proposals and write a clear, well-organized essay discussing its motivation, details, and difficulties. In the course of your essay, you should touch on all of the following topics (in whatever order seems best to you):

a. *Semantics:* How does the proposal depart from standard Tarskian semantics? Does it reject bivalence? If so, how does it understand the "values" it gives to sentences? How does it define logical consequence? Are the connectives truth-functional (or value-functional)?

b. *Logic:* How does the proposal depart from standard classical logic? Does it reject any classically valid forms of inference, and if so, which? Explain why these forms of inference aren't valid on the proposal.

c. *Motivations:* What motivates these divergences from the orthodoxy of classical logic + Tarskian semantics? How do the proposal's proponents argue for it? What are their reasons for rejecting classical semantics and logic?

d. *Problems:* What are some problems with the proposal? How might one argue against it? How good are the arguments used to motivate the proposal?

Short-answer questions

The short-answer questions will deal with some of the following topics.

- Generalized quantifiers
  - Sentences that cannot be symbolized using just unary quantifiers.
  - Definite descriptions as binary quantifiers.
  - Definite descriptions and scope.
- Substitutional quantifiers
  - Use and mention. Proper use of corner quotes.
  - Difference between substitutional and objectual interpretations of the quantifiers.
- Plural quantifiers
  - First-order vs second-order quantifiers.
  - Boolos's plural interpretation of second-order quantifiers.
  - Example of a sentence with plural quantification that has no first-order equivalent.
- Quantified modal logic
  - Quine's "number of planets" argument. What does he take it to show? Does it show this?
  - The slingshot argument. What does Quine take it to show? How can the argument be resisted?
  - Kripke's distinction between necessity and apriority. Examples of necessary aposteriori and contingent apriori sentences.
  - How does Kripke use these distinctions to argue for the intelligibility of quantified modal logic?
- Prior, Belnap, and Prawitz
  - Prior's example of "tonk." What view is this directed against?
  - Belnap's response to Prior.
  - Prawitz's response to Prior.
  - Prawitz's proof-theoretic account of logical consequence.
  - Why Prawitz's account leads to a nonclassical (intuitionistic) logic.
  - How intuitionistic logic differs from classical logic.
- Relevance
  - Meyer's and Priest's arguments for relevance logic.
  - The Lewis argument for ex falso quodlibet, and the three ways one might reject it.
  - The four-valued truth tables for E_{fde}.
  - Belnap's "database" motivation for relevance logic.

- David Lewis's response to Belnap.
- Harman's points about the relation of logic and reasoning.

· Indicative conditionals

- Difference between indicative and subjunctive conditionals.
- Arguments for the material conditional analysis.
- Grice's and Thomson's defense of the material conditional analysis against intuitive counterexamples.
- Edgington's and Stalnaker's reasons for rejecting the material conditional analysis.
- Edgington's reasons for rejecting non-truth-functional accounts of the truth conditions of indicative conditionals.
- Edgington's positive view. How does Edgington explain the plausibility of the or-to-if inference?
- Stalnaker's positive view. How does Stalnaker explain the plausibility of the or-to-if inference?
- Stalnaker on the fatalist inference.
- McGee's counterexamples to modus ponens. McGee's argument concerning exportation and modus ponens.

· Vagueness

- Why does the sorites paradox appear to pose a problem for classical logic and semantics?
- Three-valued logics. Strong vs weak Kleene. Different definitions of validity. How does a three-valued logic help with the sorites paradox?
- Łukasiewicz's continuum-valued logic. Different definitions of validity. How is a continuum-valued logic an improvement on a three-valued logic? How does a continuum-valued logic help with the sorites paradox?
- Intuitive counterexamples to truth-functionality (for three-valued logics) and degree-functionality (for continuum-valued logics).
- Supervaluational semantics. What problems with multivalued approaches does supervaluational semantics address? How does a supervaluational semantics help with the sorites paradox?
- Evans's argument concerning vague objects. How does it go, and what does it purport to show?